Replacement Sheet

Abstract

A method and apparatus for identifying and differentiating multicomponent mixtures and identifying contamination thereof using direct comparison of characteristics of the analyte and characteristics of a standard sample of a known compound. These characteristics were obtained using methods and apparatus of spectrum analysis ensuring the possibility of receiving characteristic optical shapes (multi-dimensional signatures) of samples under comparison, which signatures represent a total set of spectral distributions of intensity values for light subjected to interaction with a sample, and the process of correlation of relative intensity values of light subjected to interaction with a sample at assigned wavelength. The comparison of different optical shapes (signatures) through comparing the respective intensity values at the assigned wavelength, ensures reliable identification of samples and obtaining information as to contamination or non-contamination, which may be identified afterwards by appropriate analytical methods.